

What Is Claimed Is:

1. A method for venting an interior space of a capsule of a vehicle cryo fuel tank system, the capsule containing at least one of a line, a valve and a storage container for a cryo fuel, comprising the acts of:

generating a pressure differential between the capsule interior space and a space exterior to the capsule;

applying the pressure differential to a gas in the capsule interior space to cause a gas in the capsule interior space to be exhausted from the capsule; and

treating the gas from the capsule interior space to reduce its environmental impact.

2. The method of claim 1, wherein the act of applying a pressure differential is performed with a rinsing medium.

3. The method of claim 2, wherein the rinsing medium is an inert gas.

4. The method of claim 2, wherein the rinsing medium is an exhaust gas.

5. The method of claim 2, wherein the venting is performed when at least one boundary condition is satisfied.

6. The method of claim 2, wherein the exhaust of gas from the capsule interior space is controlled to extend over a predetermined time.

7. The method of claim 5, wherein the at least one boundary condition includes a predetermined gas concentration within the capsule interior space.
8. The method of claim 1, wherein the act of treating includes burning the gas.
9. The method of claim 1, wherein the act of treating includes catalytic oxidation of the gas.
10. A vehicle cryo fuel tank system, comprising:
 - a cryo tank capsule, wherein the capsule envelopes at least one of a line, a valve and a storage container for a cryo fuel in a capsule interior space;
 - a pressure differential generator; and
 - a gas treatment device,
wherein the pressure differential generator generates a pressure differential between the capsule interior space and a space exterior to the capsule, a gas in the capsule interior space is driven by the pressure differential from the capsule interior space, and the gas is treated by the gas treatment device to reduce its environmental impact.
11. The vehicle cryo fuel tank system of claim 10, wherein the gas treatment device is a burner.

12. The vehicle cryo fuel tank system of claim 11, wherein the gas treatment in the burner is at least one of initiated and sustained by catalytic reaction.

13. The vehicle cryo fuel tank system of claim 11, wherein the burner is an internal combustion engine.

14. The vehicle cryo fuel tank system of claim 10, wherein the gas treatment device is a catalytic oxidizer.

15. The vehicle cryo fuel tank system of claim 10, wherein the pressure differential generator is one of a blower and pump arranged outside the capsule.

16. The vehicle cryo fuel tank system of claim 10, wherein the pressure differential generator is a component of an internal combustion engine.

17. The vehicle cryo fuel tank system of claim 11, wherein the burner is the pressure differential generator.

18. The vehicle cryo fuel tank system of claim 10, wherein the capsule is the pressure differential generator, and convective forces within the capsule generate the pressure differential to exhaust the gas from the capsule interior space.

19. The vehicle cryo fuel tank system of claim 10, wherein the capsule is the pressure differential generator, and stagnation pressure generated within the capsule as the vehicle moves generates the pressure differential to exhaust the gas from the capsule interior space.

20. A vehicle cryo fuel tank system, comprising:

 a cryo tank capsule, wherein the capsule envelopes at least one of a line, a valve and a storage container for a cryo fuel in a capsule interior space;

 means for generating a pressure differential; and

 means for treating a gas in the capsule interior space,

 wherein the gas in the capsule interior space is driven by the pressure differential from the capsule interior space, and the gas is treated by the gas treatment means to reduce its environmental impact.